Title: Exploring the factors related to body image dissatisfaction in the context of obesity

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Exploring the factors related to body image dissatisfaction in the context of obesity

Anna Brytek-Matera

Summary

Aim. Self-esteem as well as emotion-oriented and problem-oriented coping strategies were examined as a possible predictive factors for body dissatisfaction in an obese female population. This study also examined the relationship between dissatisfaction with one's own body, self-esteem and stress-coping behaviours.
Method. The study population consisted of 123 women, among whom there were 63 obese female (mean BMI = 37.0, SD = 8.0) and 60 non-obese female individuals (mean BMI = 23.0, SD = 7.6). All participants completed the Body Dissatisfaction Scale, the Self-Esteem Inventory and the Brief Coping Orientation to Problems Experienced Scale.
Results. Use of emotional support as an emotion-oriented coping strategy, coping planning and general self-esteem are found to be predictive of body dissatisfaction in women with obesity. Body dissatisfaction was positively correlated with behavioural disengagement as a coping strategy and negatively correlated with coping planning, positive reframing coping as well as different dimensions of self-esteem.
Conclusion. Dissatisfaction with one's physical appearance in obese women is connected to emotion-oriented coping strategies and low self-esteem.

body shape dissatisfaction / self-evaluation / emotion-focused coping / obesity

INTRODUCTION

Obesity is a worldwide epidemic. According to the World Health Organization estimates, in 2005 about 1.6 billion adults (over 15 years old) were overweight and at least 400 million adults could be considered obese [1].

Large international differences in prevalence of overweight and obesity among adolescents in 35 countries, range from 3.5% among girls to 31.7% among boys in terms of overweight and 0.2% to 10.2% respectively with reference to obesity [2]. In female population the lowest prevalence of overweight was found in girls from Lithuania (3.5%) and Russian Federation (3.8%), whereas girls from the United States (20.1%) and Malta (18.9%) constitute a group with the highest obesity indicator. As far as the prevalence of obesity is concerned, the lowest one was found in girls from Lithuania (0.2%) and Russian Federation (0.3%) and the highest in girls from the United States (5.2%) and Malta (5.0%). However, in male population the situation looks unlike – the lowest prevalence of overweight was found in Lithuania (5.7%) and Latvia (6.7%), while the highest was indicated in boys from Malta (31.7%) and the United States (28.6%). When it comes to the preponderance of obesity, the lowest one was found in boys from Lithuania (0.5%) and Latvia (0.5%) and the highest in boys from the USA (20.1%) and Malta (18.9%). In Poland the prevalence of overweight and obesity was

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5.3% and 0.8% for the girls as well as 10.4% and 1.1% for the boys respectively [2].

The rate of obesity in Europe has tripled over the last twenty years [3], however in the United States the prevalence of adult obesity doubled from 1986 to 2000, from 10% of the adult population to a current 20%. Also, during the same period of time, the prevalence of severe obesity quadrupled from 0.5 to 2% of the adult population [4]. The data show that 68% of the adult population in the USA is classified as overweight or obese [5].

WHO further predicts that almost 2.3 billion adults will be overweight and more than 700 million will be obese in 2015 [1].

Body image represents one of the essential components of self-image, the most representative part of the self [6]. Body image is a multidimensional construct [7] which includes: (a) the perceptual component which refers to a person's skill to estimate precisely the actual size and shape of the body [7, 8]; (b) the attitudinal component including one's cognitions and affect, having reference to the body [7, 8] and (c) the behavioural component concerns a person's engagement in specific actions (e.g., exercise) and the potential shunning of particular situations/environments (e.g., avoiding the beach) [8].

Body image can play a main and relevant role in the association between obesity and the development of eating disorders [9]. Obesity is associated with negative body image, however not all obese people suffer from this ailment or are equally defenceless [10]. As Schwartz and Brownell [10] emphasise obese individuals can overestimate, underestimate, as well as be accurate in terms of body size estimation.

The difference between an individual's perception of his/her current body size and ideal body size is related to body satisfaction [9]. Body type preference (that is the ideal body shape image that a person uses to compare his/her own shape or size [9]) can affect the degree to which he or she is contented with their body. The greater the discrepancy between a perceived shape and preferred body type is, the bigger the body dissatisfaction.

Body image dissatisfaction is classified as an influential factor in the emotional quality of life and dysphoric psychological states (including self-esteem and depression) of obese persons [11]. The omnipresent weight-related branding is faced by many overweight people, and it may lead to global weight-specific psychological and behavioural consequences, such as the decrease in self-esteem, depression, behaviours with implications for weight gain or unhealthy weight control [12]. Park [13] points out that people preoccupied with their bodies would be motivated behave in a way to appear attractive and avert rejection by others. It can suggest that in order to sustain or achieve socially recognized and desired slim body individuals will be preoccupied with obtaining a healthy weight, nevertheless the prevalence of obesity will continue to increase.

We can wonder how obese people tend to cope with their body dissatisfaction. Myers and Rosen [14] found that individuals who used more maladaptive coping strategies (e.g. negative self-talking, crying, isolating themselves, avoiding or leave situation) expressed higher rates of body dissatisfaction. However, people who utilized positive coping strategies (e.g., seeing situation as others' problem, refusing to hide their body, being visible, self-loving, self-accepting) reported higher self-esteem but, on the other hand, no improvement in body image.

The purpose of this study was to ascertain the factors affecting dissatisfaction with one's own appearance in women with obesity, and to examine the correlation between body image dissatisfaction and self-esteem and coping strategies.

PARTICIPANTS

A total of 123 women were recruited in the present study: 63 obese women and 60 non-obese women. The mean age of obese women was 41.90 years (SD ± 12.23) and the mean Body Mass Index (BMI = weight (kg)/height (m)^2) was 37.09 kg/m^2 (SD ± 8.09). This indicates severe obesity (35 kg/m^2 – 39.9 kg/m^2) [15]. Tab. 1 (*next page*) shows characteristics of the experimental group.

The mean age was 42.13 years (SD ± 7.65) in the control group. The mean Body Mass Index was 23.08 kg/m^2 (SD ± 2.96), this indicates "normal range" (18.50 – 24.99 kg/m^2) [15].

Obese women (OB) was more dissatisfied with their weight and shape than normal weight

Table 1. Characteristics of the experimental group

Variables		Obese women (n = 63)	
		Number of observation (N)	Percentage (%)
Marital status	Unmarried women	12	19
	Free relationship	4	6
	Married women	36	57
	Divorce	5	8
	Widow	6	10
Education	Primary/elementary education	6	10
	Vocational education	21	33
	Secondary wducation	13	21
	Higher education	23	37
Obesity	Class I (moderate obesity)	33	52
	Class II (severe obesity)	14	25
	Class III (morbid obesity)	16	22
Being on a diet in the past	No	4	6
	Yes	59	94
Being on a diet at present	No	14	22
	Yes	49	78
Body satisfaction	No	56	89
	Yes	7	11

women (CG) was (MOB = 11.06, S ± 6.90 vs. MCG = 4.46, SD ± 6.27, t = 5.41, $p<0.001$). As compared to control group, they show a significantly lower general self-esteem (MOB = 15.52, SD ± 5.18 vs. MCG = 17.71, SD ± 4.80, t = -2.43, $p<0.05$) and familial self-esteem (MOB = 4.76, SD ± 2.26 vs. MCG = 5.61, SD ± 2.15, t = -2.13, $p<0.05$). There were no significant differences between the two groups regarding coping strategies.

MEASURES

Body dissatisfaction

The Body Dissatisfaction scale [16] measures attitudes refer to body shape. This scale assesses dissatisfaction with overall weight and specific body parts (such as the hips, stomach, thighs). Nine items (e.g. "I think my thighs are too large") are related on a 6-point scale (always-usually-often-sometimes-rarely-never). Higher scores indicate more elevated body dissatisfaction.

Self-esteem

The Self-Esteem Inventory [17] assesses attitudes and beliefs regarding self-esteem. This measure contains four subscales, each measuring a different aspect of self-esteem: general, social, professional and familial. This measure is composed of 58 items, eight of which comprise a lie scale. The items are scored on a dichotomous scale ("like me" or "not like me"). Higher scores indicate higher self-esteem.

Coping strategies

The Brief Coping Orientation to Problems Experienced Scale [18] assesses different means of

coping with stress. The Brief COPE measures problem-focused coping and emotion-focused coping. In polish version (which exclude "self-blame") [19, 20], this scale consists 13 scales (of two items each): active coping, planning, use of emotional support, use of instrumental support, venting, behavioural disengagement, self-distraction, positive reframing, humour, denial, acceptance, religion and substance use. For each strategy, scores range from 1 to 4, with higher scores indicating more use of that coping strategy.

RESULTS

Relations between the variables were evaluated by Pearson's correlation coefficient. Linear regression analysis was conducted to identify determinants of body dissatisfaction in obese women. A significance level (p) of 0.05 (two-tailed) was assumed.

The correlation matrixes of the variables are presented in Tab. 2. (*next page*). The bivariate correlation analyses revealed that higher body dissatisfaction in obese women was associated with lower general self-esteem, lower professional self-esteem, lower social self-esteem, lower familial self-esteem, lower use of coping planning and positive reframing as well as higher use of behavioural disengagement.

Tab. 3 (*page* 68) displays the results of a multiple linear regression analysis. The findings revealed that use of emotional support, coping planning and general self-esteem were unique predictors of body dissatisfaction among women with obesity. Together these variables predicted 57% of the variance ($R^2 = 0.574$; $p<.01$).

DISCUSSION

Our research shows that having body dissatisfaction is related to low self-esteem. Adult obese women who are more dissatisfied with their body shape, size and weight exhibit lower self-esteem in four domains: general, social, familial and professional. Other studies confirm the results obtained during the research [21]. Sarwer et al. [21] shows that obese women manifest body image dissatisfaction related to their obesity (almost half of them reporting the greatest dissatisfaction with their waist or abdomen). Indeed, body image dissatisfaction correlated with lower self-esteem and depressive symptoms.

In the obese women examined body dissatisfaction remained negatively correlated with all dimensions of self-esteem. Low social self-esteem may be the result of social stigmatization of overweight and obese people. Currently, the image, and at the same time, the need of slim silhouette is the one that prevails in Western culture, while the thinness is unequivocal with moderation, self-control, success (personal, professional) and the social recognition and acceptance [22]. Everything that goes beyond the cultural norms and standards is connected with social disapproval (stigma, discrimination, prejudice), being at the same time evidence that obese people are treated as people who are incapable of controlling themselves, moreover, undisciplined and even prone to laziness and/or binge eating [23]. As Glebocka and Koukola [24] emphasized little constructive methods of coping with the social criticism encourage dissatisfaction with one's own appearance.

In the professional domain low self-esteem may have its roots in the inability to realise and execute at work. Researches show that although the competences of obese people are similar to the competences of other candidates, the first group is rarely employed, and is often persecuted during recruitment [25]. There is therefore no doubt that discrimination, including areas of professional life, affects self-esteem and the way one perceives their body. If people are discriminated due to obese silhouette (which does not designate and satisfy the contemporary concept of beauty), the dissatisfaction with their appearance increases, which in turn influences one's self-image.

Low familial self-esteem may have its origin in the experience of criticism from the immediate family. Bruch coins the characteristics of so-called "obese families" [26]. According to the environment, such a family passes for being harmonious, whereas, in fact it hides the internal dysfunctionality. Parents are emotionally labile, using their offspring to satisfy their own needs. The child is required to mitigate the gulf between a mother and a father (the child plays a role of a "binder"). By overprotection,

Table 2. Intercorrelations among body dissatisfaction, self-esteem and coping strategies in obese women

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
(1) Body dissatisfaction		-0.41**	-0.35**	-0.30*	-0.41**	-0.22	-0.36**	0.15	-0.07	-0.14	0.25*	-0.05	-0.30*	-0.15	-0.05	-0.20	0.13	-0.10
(2) General self-esteem	-0.41**		0.59**	0.59**	0.61**	0.38**	0.33**	0.00	0.17	0.17	-0.38**	0.21	0.39**	0.47**	-0.03	0.31*	-0.34**	0.05
(3) Social self-esteem	-0.35**	0.59**		0.32*	0.54**	0.13	0.23	0.03	0.08	0.01	-0.27*	0.01	0.06	0.23	-0.14	0.13	-0.20	0.03
(4) Familial self-esteem	-0.30*	0.59**	0.32*		0.25*	0.40**	0.29*	0.23	0.25*	0.12	-0.30*	0.27*	0.40**	0.39**	0.16	0.24	-0.20	0.25*
(5) Professional self-esteem	-0.41**	0.61**	0.54**	0.25*		0.16	0.17	-0.06	0.00	-0.09	-0.30*	-0.01	0.09	0.23	-0.28*	0.17	-0.21	-0.01
(6) Active coping	-0.22	0.38**	0.13	0.40**	0.16		0.71**	0.27*	0.39**	0.20	-0.24	0.33**	0.50**	0.44**	0.35**	0.26*	0.16	0.34**
(7) Planning	-0.36**	0.33**	0.23	0.29*	0.17	0.71**		0.39**	0.45**	0.26*	-0.34**	0.22	0.46**	0.37**	0.15	0.14	0.10	0.16
(8) Use of emotional support	0.15	0.00	0.03	0.23	-0.06	0.27*	0.39**		0.78**	0.45**	-0.13	0.19	0.16	0.23	0.22	-0.18	0.07	0.07
(9) Use of instrumental support	-0.07	0.17	0.08	0.25*	0.00	0.39**	0.45**	0.78**		0.68**	-0.26*	0.28*	0.28*	0.29*	0.20	-0.02	-0.03	0.13
(10) Venting	-0.14	0.17	0.01	0.12	-0.09	0.20	0.26*	0.45**	0.68**		-0.11	0.24	0.35**	0.23	0.18	0.07	0.04	0.19
(11) Behavioural disengagement	0.25*	-0.38**	-0.27*	-0.30*	-0.30*	-0.24	-0.34**	-0.13	-0.26*	-0.11		0.05	0.05	0.06	-0.03	0.09	0.24	0.11
(12) Self-distraction	-0.05	0.21	0.01	0.27*	-0.01	0.33**	0.22	0.19	0.28*	0.24	0.05		0.32**	0.45**	0.00	0.33**	-0.12	0.09
(13) Positive reframing	-0.30*	0.39**	0.06	0.40**	0.09	0.50**	0.46**	0.16	0.28*	0.35**	0.05	0.32**		0.74**	0.08	0.41**	0.23	0.37**
(14) Humour	-0.15	0.47**	0.23	0.39**	0.23	0.44**	0.37**	0.23	0.29*	0.23	0.06	0.45**	0.74**		-0.06	0.45**	0.12	0.20
(15) Denial	-0.05	-0.03	-0.14	0.16	-0.28*	0.35**	0.15	0.22	0.20	0.18	-0.03	0.00	0.08	-0.06		-0.05	-0.02	0.01
(16) Acceptance	-0.20	0.31*	0.13	0.24	0.17	0.26*	0.14	-0.18	-0.02	0.07	0.09	0.33**	0.41**	0.45**	-0.05		-0.05	0.10
(17) Substance use	0.13	-0.34**	-0.20	-0.20	-0.21	0.16	0.10	0.07	-0.03	0.04	0.24	-0.12	0.23	0.12	-0.02	-0.05		0.21
(18) Religion	-0.10	0.05	0.03	0.25*	-0.01	0.34**	0.16	0.07	0.13	0.19	0.11	0.09	0.37**	0.20	0.01	0.10	0.21	

** p< 0.01
* p < 0.05

parents not only limit their child's relationship with the environment, but also they inhibit their child's development and disfigure the true image of reality. Grilo et al [27] showed that women who were obese in childhood and regularly underwent the disapproval due to their appearance, are more often dissatisfied with their adult bodies than women who, as children, were not overweight and were not, therefore, criticized because of the silhouette. Its worth pointing out that childhood obesity has already an influence not only on self-image but it also influences the

Table 3. Multiple regression analyses for predicting body dissatisfaction in obese women

Variable	Adjusted R^2	β	t	*p*
Use of emotional support	0.574	0.308	20.51	0.05
Coping planning		-0.382	-20.96	0.01
General self-esteem		-0.293	-20.54	0.05

period of adulthood along with a lot of areas of obese persons' lives. Shin and Shin [28] observed that childhood obesity affects body dissatisfaction, which mediates the relationship between obesity and self-esteem, leading to low self-esteem and high levels of depressive symptoms. Therefore, we can assume that the negative perception of one's own body can emerge in the period of in childhood and, subsequently it can endure in adult life.

Our study presents that body dissatisfaction in obese women is related more to emotion-oriented strategies (behavioural disengagement) and less problem-oriented coping ones (infrequent use of coping planning and positive reframing). Emotion-focused coping attempts to reduce stress by emotional regulation (or responses such as self-preoccupation, daydreaming), however problem-focused coping one seeks to reduce stress by cognitive reconceptualisation of problem, minimizing its effects or by resolving it [29]. As reported by Bruchon-Schweitzer and Dantzer [30], emotion-based coping strategies are derived from the defence mechanisms serving as the regulation of tension and the decrease of negative emotional states by behaviours consisting in the compensation. Our study shows that, the more women are dissatisfied with their body, the less they focus on coping with a source of stress - to a lesser extent do they plan to take further steps in order to overcome the uncomfortable situation (which is tantamount to not using problem-focused coping strategy). What is more, they also do not attempt to interpret this stressful situation in a positive way (they do not look for its positive aspects). Other studies [29, 31] demonstrate that obese individuals use infrequently problem-focused coping strategies and they frequently use emotion-focused coping strategies instead.

In our study we have found that body dissatisfaction among obese women is influenced by the use of emotional support, coping planning and general self-esteem. Rosenberg et al. [32] focus their attention on self-esteem, depression and perfectionism which are significant predictors of body image dissatisfaction in extremely obese female (where BMI score is 50.2 kg/m^2).

To sum up, a lot of clinical researches demonstrate that adult obese patients are characterized by decreased self-esteem [6, 20, 32, 33], body image dissatisfaction [34, 35] and emotion-focused coping strategies [29, 31]. Therefore, the factors enumerated above may be of crucial use in a therapy with such patients - we should take into account and make use of a substantial role these variables play in treating obesity.

CONCLUSION

Within the framework of body image, Berdah et al. [35] differentiate two aspects: the first one concerns the relevance of the body size estimation, whereas the second se focuses on body dissatisfaction. The body size estimation involves rather incorrect beliefs or dysfunctional thoughts than a sensory disorder (as was hypothesized originally for anorexia nervosa in the late 1980s). A person with obesity seems to be less accurate in body assessment in comparison to normal weight subjects [35]. Nevertheless, studies are contradictory. The hypothesis is that obese people who underestimate their body size, shape and weight appear to be those who have higher level of self-esteem and a positive image of themselves [10]. As for body dissatisfaction, it seems to be secondary to the social pressure. Body dissatisfaction is not only a cognitive construction but also a reflection of interactions with others, which can cause avoidance behaviour, or even explain a high prevalence of social phobia and agoraphobia in obese individuals [35].

In the study presented obese women who have been dissatisfied with their appearance, use emotional-oriented coping strategies which are not conducive to effective operations which aim is to overcome an uncomfortable situation (that is not to accept one's own appearance). The research [14] shows that obese individuals who use positive coping strategies (e.g. self-acceptance) during stigmatizing event, show higher level of self-esteem and lower degree of dissat-

isfaction with their bodies than those who use negative strategies (e.g., isolation)

The use of emotional support, which is likely to cause unrealization of cultural and social norms of thinness and thus criticism of others, low self-esteem and infrequent use of problem-oriented coping strategies determine body dissatisfaction in examined obese women who deviate from cultural ideals of body image.

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